XP-002135371

AN - 2000-135517 [12]
AP - RU19960117830 19960828
CPY - KURC-R
DC - E31 K05 M25
FS - CPI
IC - C22B5/12 ; C22B60/02
IN - RUSANOV V D; TROTSENKO N M; TUMANOV YU N
MC - E11-Q02 E31-B02 E35-R K05-B04 M25-E M25-G25
PA - (KURC-R) KURCHATOV INST SCI CENTRE
PN - RU2120489 C1 19981020 DW200012 C22B60/02 000pp
PR - RU19960117830 19960828
XA - C2000-041398
XIC - C22B-005/12 ; C22B-060/02
AB - RU2120489 NOVELTY - Invention relates to technology and equipment for processing uranium hexafluoride with different 235U nuclide contents into uranium metal and anhydrous hydrogen fluoride. Application of invention is most preferred to process uranium with dump-waste 235U contents. Method consists of four consecutive-parallel stages.
- DETAILED DESCRIPTION - In the first one, uranium hexafluoride is reduced with hydrogen into uranium and lower uranium fluorides in plasma or gas-plasma apparatus, and high-temperature uranium-fluorine-hydrogen stream is directed onto surface serving to load uranium tetrafluoride disposed in magnetic field-permeable metal-dielectric reactor placed in inductor of high- frequency generator. In the second stage, uranium is completely reduced into element state, which drops into lower section of metal- dielectric reactor. The third stage: removal of uranium through S-shaped pipeline with its one end embedded into bottom of metal- dielectric reactor and the other end located over cooled mold serving to pour out liquid uranium. The fourth stage: withdrawal of gaseous anhydrous hydrogen fluoride through filtration unit fitted with ejection-type blowing-away means to regenerate filter elements. In this stage, second commercial product (anhydrous hydrogen fluoride) is discharged from process apparatus. Installation contains gas-phase reactor coupled with high-temperature generator, metal-dielectric reactor powered from high-frequency generator, liquid uranium and anhydrous hydrogen fluoride discharge means with gas exhaust ecological treatment means.
- USE - Uranium production.
- ADVANTAGE - Enhanced process efficiency.
- (Dwg.1/1)
IW - METHOD INSTALLATION PROCESS URANIUM URANIUM METAL HYDROGEN FLUORIDE
IKW - METHOD INSTALLATION PROCESS URANIUM URANIUM METAL HYDROGEN FLUORIDE
INW - RUSANOV V D; TROTSENKO N M; TUMANOV YU N
NC - 001
OPD - 1996-08-28
ORD - 1998-10-20
PAW - (KURC-R) KURCHATOV INST SCI CENTRE
TI - Method and installation for processing uranium h xafluoride into uranium metal and hydrogen fluoride